UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF MISSISSIPPI
SOUTHERN DIVISION

WANDA WILLIAMS, individually and as temporary guardian and temporary conservator for JOHN ROBERT WILLIAMS, JR., incapacitated, **PLAINTIFFS**

VS. **CIVIL ACTION NO. 1:14-CV-383 HSO-JCG**

MANITOWOC CRANES, LLC; and CAIRO MARINE SERVICE, INC. **DEFENDANTS**

MEMORANDUM OF LAW IN SUPPORT OF MOTION TO EXCLUDE EXPERT TESTIMONY PROPOSING FEASIBLE DESIGN ALTERNATIVES

Manitowoc Cranes, LLC ("Manitowoc") submits this Memorandum of Law in Support of its Motion to Exclude the Proposed Expert Testimony Proposing Feasible Design Alternatives,[1] as follows:

INTRODUCTION AND REQUEST FOR EVIDENTIARY HEARING

This case arises from the catastrophic tipover of a Manitowoc 16000 mobile crawler crane operated by the Plaintiff, John Williams ("Williams"), while engaged in a tandem lift at the V.T. Halter shipyard in Pascagoula, Mississippi. This tragic accident was solely caused by VT Halter's repeated, willful, and inexcusable violations of federal OSHA regulations, industry standards, universally regarded safe practices, and the operators' manual provided by Manitowoc. Williams contends that the Manitowoc 16000 was defective and unreasonably dangerous in two respects. First, Williams alleges that the Manitowoc 16000 should have been

[1] Because the expert testimony in this matter is so deficient on so many fundamental aspects of these claims, Manitowoc has also filed concomitantly with this motion its Motion to Exclude Proposed Expert Testimony Regarding Counterweight Testing, Slip and Restraint and supporting memorandum. As demonstrated in that motion, Williams' proposed expert testimony and toy model "testing" from these very same experts does not meet *Daubert* reliability standards.

equipped with counterweight restraints which would have completely secured both stacks of eight counterweights weighing 288,000 pounds in the event of a catastrophic tipover. Second, Williams maintains that the Manitowoc 16000 was defective because it should have had, but did not have, a cable angle warning system which, according to Williams' experts, would have detected when Williams' cable angle exceeded a threshold, warned Williams (or shut off his crane), and prevented the other crane in the tandem lift from pulling Williams' crane over.

In order to prevail on a claim that the crane was defective in design under the Mississippi Products Liability Act, MISS. CODE ANN. § 11-1-63 ("MPLA"), Williams must show that there was an alternative feasible design and that such a design would have, to a reasonable probability, prevented the harm at issue. The testimony proposed by Williams' experts comes woefully short of the requirements established under the MPLA as the experts readily admit all of the proposed alternatives they describe as "concepts" and not actual designs. The law is clear -- expert testimony of an alternative feasible design must actually provide a design, as opposed to a concept or a conceptualized possibility. Further, there must be some analysis as to how the alternative design would have prevented the harm at issue. Williams' failure to include this level of detail and analysis renders the experts' opinions unreliable under the *Daubert* standard and inadmissible at trial.

Manitowoc respectfully requests an evidentiary hearing on this motion.

APPLICABLE LAW

I. *DAUBERT* APPLIES TO PROPOSED EXPERT TESTIMONY OF A FEASIBLE DESIGN ALTERNATIVE UNDER THE MPLA.

Expert testimony offered as proof of the existence of a feasible design alternative under the MPLA must meet the requirements established in *Daubert*, i.e. it must be relevant and reliable. *See Watkins v. Telsmith, Inc.*, 121 F.3d 984, 989-991 (5th Cir. Miss. 1997) (adopting

the reasoning of the Seventh Circuit and Eighth Circuit in applying *Daubert* to feasible alternative design experts) (citing *Cummins v. Lyle Indus.*, 93 F.3d 362, 366-371 (7th Cir. 1996) and *Peitzmeier v. Hennessy Indus., Inc.*, 97 F.3d 293, 296-98 (8th Cir. 1996), *cert. denied*, 117 S. Ct. 1552, 137 L. Ed. 2d 701 (1997)); *Guy v. Crown Equip. Corp*., 394 F.3d 320, 326 (5th Cir. 2004). When applying the *Daubert* standards in conjunction with specific requirements of the MPLA, Williams' proposed expert testimony regarding feasible design alternatives in this case should be excluded in this matter.

Since the Supreme Court's decision in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), federal courts have been charged with the role of "gatekeeper" in evaluating the admissibility of expert testimony. *Hammond v. Coleman Co., Inc*., 61 F. Supp. 2d 533, 538 (S.D. Miss. 1999). The standard for evaluation of expert testimony is set forth in Federal Rule of Evidence 702 as follows:

> A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:
>
> (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
>
> (b) the testimony is based on sufficient facts or data;
>
> (c) the testimony is the product of reliable principles and methods; and
>
> (d) the expert has reliably applied the principles and methods to the facts of the case.

According to Rule 702, the trial court must make two preliminary determinations in deciding whether or not to admit expert testimony. The proffered witness must be qualified as an expert by knowledge, skill, experience, training, or education. *United States v. Hernandez-Acuna*, 202 Fed. Appx. 736, 739 (5th Cir. 2006). Second, the proffered expert's opinion or

testimony must be based on scientific, technical or other specialized knowledge that will assist the trier of fact to understand the evidence or determine a fact in issue. *Hernandez-Acuna*, 202 Fed. Appx. at 739. The proponent of expert testimony has the burden of proof by a preponderance of the evidence that the testimony is reliable, i.e., that it meets the standards of Rule 702. *United States v. Hicks*, 389 F.3d 514, 525 (5th Cir. 2004).

II. AN EXPERT OPINION PROPOSING A FEASIBLE DESIGN ALTERNATIVE MUST PROVIDE MORE THAN A CONCEPTUALIZED POSSIBILITY TO MEET CRITERIA FOR RELIABLE EXPERT TESTIMONY.

Williams must prove by a preponderance of evidence that the crane had a design defect under the MPLA. As part of such proof, Williams must show that there was, among other things, a feasible design alternative that would have, to a reasonable probability, prevented the harm. In doing so, Williams must provide details of an alternative *design* and not simply a conceptualized possibility of such a design. *See Guy*, 394 F.3d at 327 Further, Williams must put forth "evidence to demonstrate the extent of the risk that the alternative design would have avoided or how the alternative design would have affected its utility." *Williams v. Bennett*, 921 So. 2d 1269, 1276 (Miss. 2006) (quoting *Johnson v. Davidson Ladders, Inc.*, 403 F. Supp. 2d 544, 550 (N.D. Miss. 2005)). The statute plainly requires that Williams prove that the feasible design alternative "to a reasonable probability [would have] prevented the harm." MISS. CODE ANN. § 11-1-63(f)(ii). Without evidence that "the risk that might have been avoided by the alternative design," the claim must fail. *Williams,* 921 So. 2d at 1276 (quoting *Lavespere v. Niagara Machine & Toolworks, Inc.*, 910 F.2d 167, 183 (5th Cir. 1990))

In order for expert testimony of a feasible design alternative to meet the rigors of *Daubert,* it must provide a certain level of detail as to the specific design. "The proper methodology for proposing alternative designs includes more than just conceptualizing possibilities." *Guy*, 394 F.3d at 327 (emphasis added) (quoting *Watkins*, 121 F.3d at 992); *see*

also Williams, 921 So. 2d at 1275 ("It follows that the mere mention of a design alternative by an expert comes well-short of lending evidentiary guidance to a court.")

In *Guy*, the Fifth Circuit upheld the Northern District of Mississippi's exclusion of expert testimony regarding a feasible design alternative, which resulted in a directed verdict in favor of the defendant manufacturer. *Guy*, 394 F.3d at 331. In that case, the plaintiff injured her leg while she was operating a stand-up forklift. The forklift collided with an object and the plaintiff's leg came out of the cab and was crushed between the forklift and railings. *Id.* at 323. The plaintiff alleged, in part, that the cab of the forklift did not have a restraint or enclosure to prevent an operator's leg from being exposed to this type of injury. The proposed expert advanced some concepts for a feasible design alternative; however, the witness never identified the best alternative design and never provided specifically formulated opinions as to feasible alternative designs, instead only provided conceptual suggestions. In excluding the proposed expert testimony, the Fifth Circuit found that the expert's report and proposed testimony regarding the alternative designs were inadequate because, among other things, (i) he "did not refer to specific designs;" (ii) the proposed alternative amounted to "a 'conceptual drawing', rather than a precise design or prototype;" (iii) the proposed expert "relied on unscientific conceptual sketches and broad ideas;" (iv) he "had not reached any concrete conclusions about the best design alternative;" and (v) he presented mere "conceptual suggestions, instead of specifically formulated opinions." *Id.* at 326-27. In taking these issues into account, the Fifth Circuit correctly found that "the district court acted within its broad discretion when it decided Lohman's conceptual suggestions about a restraining device as a feasible design alternative did not rise to the level of an admissible expert opinion." *Id.* at 327.

Since the *Guy* decision, federal courts in Mississippi have applied this ruling to both the exclusion of expert testimony and the measuring stick for evidence required to meet a plaintiff's burden in a design defect case under the MPLA. For instance, Judge Starrett applied the principals of *Guy* in *Ainsworth v. Cargotec USA, Inc.*, 2014 U.S. Dist. LEXIS 11534 (S.D. Miss. 2014) in finding that:

> Plaintiff's expert, Tyler Kress, stated in his report that the forklift's blind spots 'could have been reduced or minimized . . . through the use of inexpensive mirror components incorporated into the design of the forklift,' but he failed to provide any specific information regarding, among other things, the proposed mirrors' shapes, sizes, placement, orientation, or the extent to which they would increase the forklift driver's field of vision. Similarly, Plaintiff's expert mentioned the possibility of a camera system or a forward alarm during his deposition, but he failed to provide a specific design for such components or engage in the type of comparative analysis contemplated by *Williams*.

Ainsworth v. Cargotec USA, Inc., 2014 U.S. Dist. LEXIS 11534, 10-11 (S.D. Miss. Jan. 30, 2014), *aff'd on other grounds*, 595 Fed. Appx. 326, 328 (5th Cir. 2014) (Fifth Circuit affirmed on the theory that the forklift functioned as designed and thus did not consider the defective design theory).

Further, courts have certainly taken into consideration whether the expert tested the alternative design, and whether such testing was itself accurate and reliable. *See Watkins*, 121 F.3d at 984 (adopting the reasoning of the Seventh Circuit and Eighth Circuit in applying *Daubert* to feasible alternative design experts, in which both courts affirmed the exclusion of such experts for, among other things, failure to test such designs) (citing *Cummins*, 93 F.3d at 366-371; *Peitzmeier*, 97 F.3d at 296-98, *cert. denied*, 117 S. Ct. 1552, 137 L. Ed. 2d 701 (1997)); *Guy*, 394 F.3d at 326 (The district court "disapproved of Lohman's failure to test any of his designs" and specifically found that the experts opinions were "untested and unreliable and thus failed the *Daubert* analysis."); *see also Vindiver v. Ohio River Co., LLC*, 174 Fed. Appx. 206,

207-08 (5th Cir. 2006) (failure to test alternative design was a factored considered by the Court in excluding expert testimony). Therefore, in order to meet the requirements of *Daubert* as applied to the feasible design alternative requirement of the MPLA, expert testimony must provide a particular design – as opposed to possible concept – and, in most cases, that design should be tested to some degree.

In sum, in order to be reliable under *Daubert*, expert testimony of an alternative feasible design must:

- Be more than a conceptualized possibility. *Guy*, 394 F.3d at 327.
- Provide a specific design for instrumental component parts. *Ainsworth*, 2014 U.S. Dist. LEXIS 11534, 10-11.
- Identify how the alternative design would avoid the risk at issue and to a reasonable probability have prevented the harm. *Williams*, 921 So. 2d at 1276 (quoting *Johnson*, 403 F. Supp. 2d at 550) and MISS. CODE ANN. § 11-1-63(f)(ii); *see also Elliot v. Amadas Indus.*, 796 F. Supp. 2d 796, 808 (S.D. Miss. 2011) ("in a product liability case, a proposed expert must 'be able to independently establish the technical basis for the utility and safety of the proposed alternative designs'… Sparks has not provided any technical basis for his proposed alternative designs.") (quoting *Watkins*, 121 F.3d at 993.)

Without all of these components, expert testimony of an feasible design alternative is unreliable.

ARGUMENT

I. EVIDENCE REGARDING COUNTERWEIGHT CONSTRAINTS AS A FEASIBLE DESIGN ALTERNATIVE IS UNRELIABLE.

A. VAUGHAN'S COUNTERWEIGHT RESTRAINT CONCEPTS FALL WOEFULLY SHORT OF THE RELIABILITY STANDARD REQUIRED UNDER *DAUBERT*.

Williams' expert, Joshua Vaughan, proposed a number of restraint mechanisms which, in his view, would and could completely restrain each 144,000 pound stack of counterweights for a total of 288,000 pounds in counterweights in the event of a catastrophic tipover. However, Vaughan's deposition demonstrated beyond doubt that he had no actual alternative designs to

offer, but instead, like Singhose, was merely proposing a "concept." In reality, Vaughan had not undertaken even the most rudimentary analysis to determine whether his "concepts" would work, and, when in a bind, deferred to Manitowoc to finish his design "concepts." Most importantly, some of Vaughan's design "concepts" violated manufacturer specifications for the materials he proposed to use. Given all of these circumstances, Vaughan's "concepts" regarding alternative designs are unreliable.

1. Vaughan's Web Tiedown Concept Lacked Any Real Degree Of Design Detail And Even Violated The Manufacturer's Specifications For The Materials Included.

Vaughan's report first proposed a web design of tiedowns and chain restraints to completely restrain the counterweight stack. (Depo. Exhibit 101 and 102). According to Vaughan, these are two different implementations of the same concept. (Vaughan Depo., at 179). Vaughan had never seen a mobile crawler crane with his web concept (Vaughan Depo., at 176), and had only seen one picture of a chain restraint which was produced in this case. (Vaughan Depo. at 180). As with all his concepts, Vaughan repeatedly cautioned that his proposals were merely "concepts":

> Q. This [Exhibit 101] is your example of webbing tiedowns, right?
>
> A. This is one configuration that could be used as tiedowns, yes.
>
> Q. And would you consider this a design – an alternative concept or an alternative design or how would you characterize it?
>
> A. I would call this a **tie-down webbing concept**.

(Vaughan Depo., at 163-64) (emphasis added). Vaughan's "concept" required the chain webbing and restraints to cross the top edges/corners of the counterweights. When confronted with the chain manufacturer prohibition against the use of chains across edges/corners, Vaughan did not propose a way to round the edges/corner and said "some analysis would be needed."

(Vaughan Depo., at 168). Likewise, Vaughan conceded that his own drawing of the web design which had chains running along the edge/corners of each counterweight was "bad practice" and should be moved:

> The key part of this **concept** that – that I want to concentrate on here is that by having a large – relatively large number of tiedowns around the counterweight stack, you can – you can decrease the load any one of those would need to support. The exact – the location of those that are depicted here as being right on that corner, they would not be placed right on the corner. That's bad practice to place them right on the corner.

(Vaughan Depo., at 169) (emphasis added). When asked whether there were a specific number of chain lengths in his web tie-down concept, Vaughan deferred and testified that "this provides a **working concept** . . . the size, the number of restraints and the configuration can be used determine what the working load limit on the available restraints needs to be there." (Vaughan Depo., at 172) (emphasis added). In his deposition, Vaughan introduced for the first time the fact that tabs would need to be added to the counterweight tray on which to fasten the chains, but, again, "I have not personally sketched where a tab would be. . ." (Vaughan, Depo., at 174). "So these designs, again, to reiterate, **present concepts and ideas to design a restraint system** capable of completely securing the counterweights. The implementation details are not included in these figures." (Vaughan Depo., at 186) (emphasis added).

Chain manufacturers prohibit the use of chains when shock loading or side loading are expected. "Shock loading is prohibited and side loading must be avoided, as it exerts additional dynamic forces or loading which the product is not designed to accommodate." (Depo. Exhibit 104 – Peerless Chain General Safety Guidelines, at 2). Confronted with this prohibition, Vaughan would not admit that shock loading and side loading would be experienced in a catastrophic tipover, and offered only that "shock loading and side loading could both be mitigated by proper design of a chain restraint subsystem . . ." (Vaughan Depo., at 189-90).

Although Vaughan testified that the shock loading could be mitigated by proper pre-tensioning, Vaughan's design "concept" does not include a method of proper tensioning of the chains. (Vaughan Depo., at 191-93). Confronted with the prohibition against shock loading in chains, Vaughan said more needed to be done:

> I would want to talk -- do my own analysis of these chains and, perhaps, even talk with these chain companies to see what the limits of the chains are, and if they are compatible with the application, I am fine, so you can use them.

(Vaughan Depo., at 196). As of the date of his deposition, Vaughan had not actually picked up the phone to talk with any chain manufacturer to determine whether he could use chains for his intended purpose. (Vaughan Depo., at 197-98).

2. Vaughan's Testimony Regarding A Pin And Lug Concept Lacks Any Analysis On Whether It Could Have Completely Restrained The Counterweights In A Catastrophic Tipover And Prevented This Accident.

Next, Vaughan proposed that the Manitowoc 16000 should be equipped with a pin and lug system presently found on other model cranes so that the counterweights would be completely secure in the event of a catastrophic tipover. However, Vaughan ignores the fact that no one – other than Williams' experts in this case – suggests that those pins and lugs are designed for anything other than securing the counterweights during normal operations. When Vaughan was pressed on the specific issue of whether this pin and lug concept would have restrained the counterweights at issue, he could not give a definitive answer because he had not done the basic calculations needed:

> Q. Do you know whether the restraint mechanisms in that crane will restrain, completely restrain the counterweights in the event of a catastrophic tip over?
>
> A. No, sir, but **I think those calculations could be done**.
>
> Q. Okay. But sitting here today, you haven't done those?

A. That's correct, yes.

(Vaughan Depo., at 200) (emphasis added). Vaughan cautioned that before he would transfer this pin and lug design to the Manitowoc 16000, he would need to do additional work to see if that restraint system would work on a Manitowoc 16000. (Vaughan Depo., at 201-02). "[T]hat would be an analysis and part of the design procedures for designing a restraint system for the Manitowoc 16000." (Vaughan Depo., at 202). For these reasons, Vaughan has not, and cannot, demonstrate that the pin and lug mechanism will hold the counterweights in a catastrophic tipover, and would have prevented this accident.

3. Vaughan Admits That His Counterweight Barrier Idea Is Merely A Conceptual Sketch Not Even Prepared To Scale.

Vaughan's last proposal was a counterweight barrier which would be added to the crane. Like his other "concepts," Vaughan has never seen a mobile crawler crane with this counterweight barrier. (Vaughan Depo., at 208). In fact, Vaughan refused to call his counterweight barrier a "design":

> I think **it's representative of a design**. The sketch I would call an **example concept** that fulfills the design requirements for this particular application.

(Vaughan Depo., at 208). But as to the sketch, Vaughan testified that "I would not say that this sketch is intended to be dimensionally accurate." (Vaughan Depo., at 208). By his own admission, his counterweight barrier was a conceptual sketch not even completed to scale. This type of conceptual sketch does not meet the rigors of *Daubert*, and should be excluded from the trial of this matter.

B. SINGHOSE'S "CONCEPTS" ARE NOT RELIABLE.

In his report and deposition testimony, Singhose conceded that he has proposed nothing more than "concepts." As described below, Singhose did nothing but make several blanket

"concept" proposals, and did not support any of those "concepts" with analysis, calculations, or scientific substantiation to be deemed reliable under the *Daubert* standards applied to testimony of a feasible design alternative under the MPLA.

1. The Chain, Cable Or Strap Restraint Concept Does Not Meet The Standards Of *Daubert*.

First, Singhose proposes that the Manitowoc 16000 should be equipped with chain, cable or strap restraints for the purpose of completely securing the counterweights in the event of a catastrophic tipover. Singhose conceded that there are a "large range of choices" of possible chains, and that he had not picked which one of these choices to propose. (Singhose Depo., at 217). To further explain why he had not selected the type of chain, Singhose explained:

> I haven't gone to that -- what I call, detailed design. **I have a concept that I know will work**, and I have to get those forces, those estimated forces from -- Manitowoc should have those, given those peak forces from Manitowoc, I could very simply go and select a chain of the proper material and size.

(Singhose Depo., at 217) (emphasis added). As to the type of cable restraint he would propose, Singhose conceded "I haven't done the detail[ed] design for Manitowoc on this, no." *Id.* Nor has Singhose consulted the National Association of Chain Manufacturers' Welded Steel Chain Specifications, which specifically prohibit the use of chains Singhose contemplates. (Depo. Exhibit 100, at 1) ("Sudden application of dynamic loads, which cause the load in the chain to exceed the working load limit, are to be avoided.").

Many of the component parts of Singhose's concept are still left up in the air. In particular, he did not know, and had not finalized, the strength of the chain he would select. Singhose said he "would start with something like 200,000 pounds." (Singhose Depo., at 218). On the number of chains which he would employ on the restraint mechanism, Singhose said, "I would start with one. If it turns out that, for some reason, there's a lot higher dynamic forces

than I initially anticipated, I would go to a bigger chain if that didn't fit or it was too heavy to install, I'd probably break it into two chains." (Singhose Depo., at 219). Singhose could not and did not specify where the chain should be attached to the crane. "Again, **I didn't do the detailed design** …I would just start with what Manitowoc already has." (Singhose Depo., at 220). (emphasis added). "There's plenty of ways you could put a chain around there and secure it." (Singhose Depo. at 222). Simply put, by his own admission, Singhose's chain, cable or strap proposal is an alternative concept, but not a feasible design that meets the specificity required under the MPLA. Further, the lack of details and decisions on key components of the design renders Singhose's testimony on this proposal unreliable under the *Daubert* standard.

2. Singhose's Pin And Lug Concept Does Not Meet The Standards Of *Daubert* Because He Does Not Know Whether It Could Have Completely Restrained The Counterweights In A Catastrophic Tipover And Prevented This Accident.

Second, Singhose proposed that Manitowoc adopt the pin and lug design from the Linkbelt mobile crawler crane as a counterweight restraint device in a catastrophic tipover. To be clear, such a design is already in existence on other crawler cranes (including some made by Manitowoc) and those restraints can, and do, secure the counterweights for normal operations. But **no one** maintains that these restraints will hold the counterweight stack in the event of a catastrophic tipover (except Williams' experts in this case).

The fatal defect in their opinions, however, is that they have no done work to determine whether the pin and lug will actually secure the counterweights during a catastrophic tipover, and would have prevented the harm here. When asked whether the pins and lugs would secure the counterweights on the Linkbelt in the event of a catastrophic tipover, Singhose's response was, "I think it very well **could**. I didn't do those calculations . . ." (Singhose Depo., at 225.) (emphasis added). He could not even begin to assess whether the restraints would hold because

he did not know how much the Linkbelt counterweights weighed. (Singhose Depo., at 226). Nor could or did Singhose testify about what dynamic forces such a pin and lug counterweight restraint would need to hold: "If they [Manitowoc] turned over to me their dynamic codes, I'm quite certain that I could have an answer for you relatively easily." (Singhose Depo., at 228).

Based on his lack of knowledge on these key issues, Singhose could not provide any analysis on whether the incident here would have been avoided with the use of his pin and lug concept. Without such an analysis, testimony regarding the pin and lug concept cannot be admitted this matter.

3. Singhose's Testimony Regarding The Counterweight Barrier Concept Does Not Meet The Requirements Of *Daubert*.

As a final "concept" proposal, Singhose contends that a counterweight barrier is an alternative design. However, when pressed on the design details, he readily conceded that this was only a concept.

> Q. Okay. And, again, I think you characterized this as a concept, right?
>
> A. I probably called that -- you know, when I say 'design concept,' to me that means this is something we should **try out** and **work through** the numbers, **get the specifics**, and it will work.

(Singhose Depo., at 230). (emphasis added). When asked a relatively simple question about how much his counterweight barrier would weigh, Singhose guessed.[2] Likewise, Singhose had no idea about how the counterweight barrier should be secured to the crane and, in fact, deferred to Manitowoc engineer, Joe Rucinski, about how it should be done:

> Q. Dr. Singhose, where do you secure that barrier?

[2] "So you cut that in half, you get 22,000 pounds, and probably I'd cut a little bit more of that off because I'm not going all the way through the crane, so I would estimate 15 to 20,000 pounds." (Singhose Depo., at 234).

> A. And I'm saying I'd hire Mr. Rucinski to modify his design to attach this one which weighs a lot less.
>
> Q. Okay. So you don't have a concept for that?
>
> A. I have a concept. I don't have a detailed design.

(Singhose Depo., at 235). When pressed about whether the counterweight barrier would be secured to the existing counterweight tray, into the rotating bed of the crane, or somewhere else, Singhose testified:

> A. I think those are good suggestions. Let's take a look at them and figure out the details, but this **concept** is going to work.
>
> Q. Which one do you want to do?
>
> A. I personally would investigate several of those.
>
> Q. Okay. So you haven't decided?
>
> A. Yeah. There's a number of ways -- it's not hard. There's a number of ways it could be done. Let's investigate them and pick the best way.

(Singhose Depo., at 235-36) (emphasis added). As can be seen by Singhose's testimony, his concept lacked specificity and, in fact, proposed hiring a Manitowoc engineer to actually design the details of his alternative proposal. Suffice to say, the lack of a specific design should result in Singhose's testimony on this issue being excluded under *Daubert* since his testimony amounts to nothing more than a conceptual possibility that is unreliable.

II. WILLIAMS' PROPOSED EXPERT TESTIMONY REGARDING THE CABLE ANGLE SENSOR IS UNTESTED, UNRELIABLE AND DOES NOT MEET THE *DAUBERT* STANDARD.

Williams maintains that the Manitowoc 16000 is defective and unreasonably dangerous because it lacked a cable angle warning system which would have detected the cable angle on both cranes involved in the accident, determined when those cable angles reached an excessive angle, and provided a warning to the operator(s) or shut off the crane(s) which would have

somehow prevented the accident. This proposal is generally derived from the report and testimony of Williams' proposed expert, Sorensen, and to a lesser extent, the report and testimony of Singhose. Sorensen's report and testimony describes how such a device could have *conceptually* been used on this crane. However, by Sorenson's own admission no such device has ever been used on a crawler or mobile crane like the Manitowoc 16000. Because no such device exists for this type of crane, Sorenson has done nothing more than propose an untested concept and the testimony regarding such a concept should be excluded because it does not meet the requirements set forth in *Daubert* or the MPLA.

A. CABLE ANGLE WARNING SYSTEMS HAVE NEVER BEEN DESIGNED FOR, INSTALLED ON, OR SOLD FOR A MOBILE CRAWLER CRANE.

It is undisputed that no cable angle warning systems have ever been installed on the type of crane at issue in this case. There is simply no evidence or testimony from anyone that a cable angle warning system of the kind proposed by Sorensen was, or is, commercially available for application on mobile crawler cranes like the Manitowoc 16000. (Closson Report, at ¶ IV.A.1.xi). There is no proof that there were any cable angle warning systems that were commercially available in 2010 or any that are currently in use on any mobile crawler cranes today. (Singhose Depo., at 245, 255). Sorensen, to this day, has not designed, produced, or installed any of these systems on a mobile crawler crane. (Sorensen Depo., at 236).

B. SORENSEN'S "CONCEPT" FOR A CABLE ANGLE WARNING SYSTEM IS NOT AN ALTERNATIVE DESIGN AND DOES NOT MEET THE REQUIREMENTS OF *DAUBERT* OR THE MPLA.

Sorensen does not even attempt to propose an alternative design. Sorensen's report and subsequent deposition testimony merely reflects his views on the "control architecture of a cable angle warning system." (Sorensen Report, at 29 et seq.). Sorensen does not, and cannot, say that such a system has actually been designed – by him or anyone else. Rather, Sorensen's report

only says that this "architecture" "may be applied equally well to mobile boom cranes. . . ." (Sorensen Report, at 30-31). Even Sorensen admitted that his proposal is really in the nature of a "concept" and not a detailed design drawing. (Sorensen Depo., at 123). As Sorensen testified:

> Well, to be clear, this is an overview of how this type of system **would** function. This is not the detailed implementation of the system.

Sorensen Depo., at 122 (emphasis added). Likewise, Sorensen testified:

> Here is just an example of how I take that same methodology, and I **would** apply it to the mobile boom crane.

(Sorensen Depo., at 146) (emphasis added). In short, Sorensen's "concept" is simply what he "would" do rather than an actual alternative design. For his part, Singhose likewise merely proposes "various options" for how the cable angle should be measured, testified that "we should investigate it," and "listed some other possible ways of doing it [measuring cable angle]." (Singhose Depo., at 254). However, Singhose fails to add any design detail or substance to the lack of same in Sorenson's concept.

Because Sorensen has, and is, only proposing a "concept" or "architecture," Sorensen has not provided, and cannot provide, many of the essential features of an design alternative, which makes any such testimony unreliable under *Daubert*. For example, his "architecture" proposes that the cable angle warning system should set up a "threshold calculation" of cable angle "beyond which cable angles are considered adverse." (Sorensen Report, at 29). However, Sorensen does not set a specific threshold angle. "I would not assign a -- a static number to a cable angle and say that a crane should never exceed this cable angle." (Sorensen Depo., at 117). In fact, Sorensen never even attempts to determine a specific threshold. (Sorensen Depo., at 124). Instead, Sorensen testified how he would *theoretically* establish the threshold angle, but that he has not gone through the analysis to actually establish that angle:

> A. THE WITNESS: The threshold cable angle could then be set to the cable angle resulting from the statics analysis, lessened by an appropriate factor of safety. So what I just outlined there is much more definitive than -- than I think what you are characterizing is.
>
> Q. (By Mr. Boone) Okay. And I don't mean to quibble with you, Doctor. But you haven't -- you're telling us how to do it, but you haven't -- you haven't actually done it, right?
>
> MR. COMER: Object to form.
>
> THE WITNESS: That's correct.

(Sorensen Depo., at 126). By his own admission, the threshold calculation must include a factor of safety, but concedes "that an appropriate factor of safety would require some additional investigation." (Sorensen Depo., at 134-35). Sorenson did not undertake this additional investigation.

Next, Sorensen's "concept" fails to offer even the slightest detail on how the cable angle on his cable angle warning system would be measured. In his report, Sorensen posited that it could be measured "directly or indirectly." (Sorensen Report, at 31). During his deposition, Sorensen testified that it could be measured by placing a device directly on the hoist line or have another type of device which measures the cable angle indirectly, but Sorensen remained steadfastly noncommittal that it "could be either, actually." (Sorensen Depo., at 143). After being pressed, Sorensen testified that for his "first attempt" he would measure the cable angle indirectly. *Id*. Sorensen could not, and did not, explain where the cable angle sensor should be located. When asked whether his cable angle sensor needed to be on the main line (at the top of the main boom section) or the whip line (at the end of the jib), or both, Sorensen testified that he would have to "ask Manitowoc." (Sorensen Depo., at 154).

Sorensen concedes that the cable angle sensor is just one component of the overall system. Even if a cable angle sensor could be found which would be appropriate for use on a

crawler crane, that one piece would still have to be incorporated into the overall cable angle warning system, which Sorensen readily concedes he has not yet designed. Along those same lines, Sorensen's "concept" or "architecture" does not specify what the response from the warning system should be. Assuming that a threshold angle has been set and that the system has determined the cable angle is beyond the threshold angle, Sorensen opines that it should provide a response. But what type of response he does not say. According to Sorensen, the response could be a warning, could be a controlled response (e.g., stopping the crane), or it could be both. (Sorensen Depo., at 131-32). When asked which one he would pick, Sorensen replied "It's not my job to pick." (Sorensen Depo., at 139). Stated differently, Sorenson claims it is not his job to testify as to how the concept which he has proposed for a warning system would work to prevent the incident at issue in this litigation.

Because Sorenson's testimony fails to provide anything other than a conceptualized possibility that leaves out multiple details regarding many of the key components, it is unreliable for the purpose of providing expert testimony of a feasible design alternative. The standard for expert testimony of a feasible design alternative requires more than a concept and without a specific design for the basic components of the cable angle warning system, Sorenson's testimony on such a system is unreliable and inadmissible. *See e.g. Ainsworth*, 2014 U.S. Dist. LEXIS 11534, 10-11.

C. SORENSON'S PROPOSED CABLE ANGLE WARNING SYSTEMS WERE NOT, AND CANNOT BE, TESTED ON A CRAWLER CRANE, LIKE THE MANITOWOC 16000.

Sorenson's proposed concepts have never been used or even tested on crawler cranes like the Manitowoc 16000. Sorensen's report proposes a "machine vision-based sensor" manufactured by Siemens which measures cable angle by using an industrial camera to determine the position of a reflector affixed to the bottom block. (Sorensen Report, at 35).

According to product literature, however, there are several reasons why the SIMOCRANE CenSOR proposed by Sorensen will not work on a mobile crawler crane like the Manitowoc 16000. First, the sensor will not work is because the system will not function below zero degrees Celsius (Sorensen Depo., at 161), and mobile crawler cranes must function below that temperature. Second, the Siemens product literature provides that the maximum distance at which this system can be used in 55 meters, or 180.45 feet, and Sorensen conceded that the cable angle sensor system "would not work if the distance was greater than 55 meters [180.45 feet]." (Sorensen Depo., at 175). The main boom on Williams' crane was 216 feet in length, and the 70 foot jib extended the total height of Williams' crane even further. More importantly, Sorensen readily concedes that there are configurations of the Manitowoc 16000 reaching boom heights of 400 feet which means that this cable angle sensor simply will not work for all anticipated uses of the Manitowoc 16000.

Next, Sorensen proposes, as an alternative to the machine vision-based sensor, the use of an inclinometer. An inclinometer is simply a device which measures an angle, or incline. While there are many different kinds of inclinometers which have been used in many different kinds of ways (everything from a level in carpentry to a tilt sensor on a pinball machine), there is not a single mobile crawler crane that uses an inclinometer to measure cable angle. Sorensen has not even determined where to place the inclinometer, but instead testified that "**I haven't done the detailed design** that I would do if I were tasked with implementing this on the crane." (Sorensen Depo., at 191) (emphasis added). Consequently, he cannot tell us where to put the inclinometer, but only "in a place where you could measure the cable angle either directly or indirectly." (Sorensen Depo., at 191). Sorensen "would identify a suitable location," but only after consulting Manitowoc:

> But I would confer with the Manitowoc engineers, and I would go over the mechanical drawings. I would go over the electrical prints and look at the requirements that would be imposed by those constraints. And in collaborating with the other engineers, we **would identify** a suitable location.

(Sorensen Depo., at 192) (emphasis added). Sorensen's "concept" or "architecture" is not a design at all; and he concedes that he would not even attempt to propose such a design without "asking Manitowoc." Because Sorensen has not actually designed or built anything, there is nothing to actually test. The components he does propose cannot be used on the Manitowoc 16000. Thus, his proposed testimony is untested, unreliable and should be excluded.

D. SORENSON FAILS TO PROVIDE THE NECESSARY ANALYSIS OF HOW THE CABLE ANGLE SENSOR CONCEPT WOULD HAVE PREVENTED THIS INCIDENT.

Sorenson fails to give an analysis or comparison of how the cable angle warning system would have prevented the injury in this case. Sorensen's "concept" and "architecture" for his cable angle warning system would require regular input from the crane on what load the crane was carrying. (Sorensen Depo., at 137). Load information, according to Sorensen, would need to be continually monitored by the crane.

> Q. And so – so your system here requires the input of load within the – the weight of the load within the lift, true?
>
> A. It would use data from the load cell. So whatever the load cell is measuring, that's what it would use.
>
> Q. Okay. And that needs to be doing its thing during the entire course of the lift, true?
>
> A. The load cell, our system would use information from the load cell.

(Sorensen Depo., at 137).

At the time of this accident, Williams had de-activated his Rated Capacity Indicator/Rate Capacity Limiter (RCI/RCL) for the main drum which operated his hoist line. (Manitowoc

30(b)(6) Depo., Taylor, at 84). That meant that Williams could continue to operate the main hoist line of the crane, but that the RCI/RCL screen will not present data such as load cell information. *Id.*

For that reason and others, Manitowoc's experts and witnesses universally have concluded that even if a cable angle warning system were possible (and it is not), and it was installed on Williams' crane, it would not have prevented this accident. (Closson Report, at ¶ IV.A.1.x). Without an analysis of how the cable angle sensor concept would have prevented this accident, Williams' proposed expert testimony regarding such a device must be excluded. *See Williams*, 921 So. 2d at 1276 (failure to provide "evidence to demonstrate the extent of the risk that the alternative design would have avoided or how the alternative design would have affected its utility" is fatal under the MPLA) (quoting *Johnson*, 403 F. Supp. 2d at 550).

CONCLUSION

None of the testimony and evidence provided by Williams' experts in support of his proposed feasible design alternatives actually meets the standard for such a *design*. The experts repeatedly refer to their ideas as concepts and when pressed on specific details regarding their "designs," the experts are simply unable to provide any level of detail and certainly not enough detail to qualify this testimony as reliable under *Daubert*. Therefore, all expert testimony regarding feasible design alternatives should be excluded from the trial of this matter.

Respectfully submitted, this the 29th day of October, 2015.

MANITOWOC CRANES, LLC

BY: BALCH & BINGHAM LLP

BY: /s/ Walter H. Boone
Of Counsel

Walter H. Boone (MSB # 8651)
BALCH & BINGHAM LLP
188 East Capitol Street, Suite 1400
P.O. Box 22587
Jackson, MS 39225-2587
Telephone: (601) 965-8179
Facsimile: (888) 856-9542
wboone@balch.com

Matthew W. McDade (MSB # 103207)
BALCH & BINGHAM LLP
1310 Twenty Fifth Avenue
Gulfport, MS 39501
Telephone: (228) 864-9900
Facsimile: (228) 864-8221
mmcdade@balch.com

CERTIFICATE OF SERVICE

I do hereby certify that I have this day served a true and correct copy of the above and foregoing pleading by the Court's electronic filing system which sent notification to the following counsel of record:

Ben F. Galloway, III
Owens, Galloway, & Myers, PLLC
P O Drawer 420
Gulfport, MS 39502-0420
bfg@owen-galloway.com

Bryan E. Comer
Desmond V. Tobias
Jason McCormick
Tobias, McCormick & Comer, LLC
1203 Dauphin Street
Mobile, AL 36604
bryan@tmclawyers.com
desi@tmclawyers.com
Jason@tmclawyers.com

THIS, the 29th day of October, 2015.

/s/ Walter H. Boone
WALTER H. BOONE